

426509

CTCCCTCCAAGTTGTGCAGCCGGACCGCCTCGGGGTGTCCAGCCGGCTGCCGGAGGCCCCCTCTGGGGGGGGGGGGGGGGCTCGGGG 90  
GGGGCCCTGACCAGAAAACAGGAAGAACCAAGGCTCGGTCCAGTGGCACCCAGCTCCCTACCTCTGTGCCAGCCGCCTGCCCTGGCA 180  
GCCCATTCAGCGTCCCCACTGTGACCACTTGCTAGTGTGCCCTCACCTGCCCTAGTTCCCTCTGGGGGGGATGGGGGGGAG 270  
M A G R

Sma I

GCTCTCTGGTTCTGGCGGCATTCACGGCTGTGATTCTGCTGAGGAACCTCCCCGGGTGAGCCCCGCTCTCCGAGCCTGGCACC 360  
G S L V S W R A F H G C D S A E E L P R V S P R F L R A W H

Sma I

CCCCTCCCGTCTAGCCAGGATGCCAACGAGCCCTGGGCCCCGGCACCCAGTGTATCACAAATGCGACACACCCGCCCCAAGCCAG 450  
F P P V S A R M P T R R W A P G T Q C I T K C E H T R P K P

Stu I

Kpn I

GGGAGCTGGCCTCCGCAAGCCGACGTGGTCAACCATCCTGGAGGGCTGCAGAAACAAGAGCTGGTACCCCGTCAAGCACCACACAG 540  
G E L A F R K G D V Y T I L E A C E N K S W T R V K H H T S SH3

Pvu II

GACAGGAGGGCTGCTGGCAGCTGGGGCCCTGCAGGGAGCCGGAGGGCCCTCCGCAGACCCAAAGCTCACCTCATGCCGTGGTCCACG 630  
G Q E G L L A A G A L R E R E A L S A D P K L S L M P L W F H

Pvu II Pst I

GGAAGATCTGGGCCAGGAGCCTGTCCAGCAGCTGCAGCCTCCGAGGATGGCTGTTCCTGGTCCGGACTCCGGCCACCCGGCC 720  
G K I S G Q E A V Q O L Q P P E D G L F L V R E S A R H P C SH2

Cla I

ACTACGTCTGTGGTACCTTGGCCGACGTACCAACTACCGCGTGCACCCGACGGCCACCTCACAAATCGATGAGGCCGTGT 810  
D Y V L C V S F G R D V I H Y R V L H R D G H L T I D E A V

TCTCTGCAACCTCATGGACATGGTGGAGCATTACAGCAAGGACAAGGGCGCTATCTGCACCAAGCTGGTGGAGACCAAABC GGAAACACG 900  
F F C N L M O H V E H T S K D K G A I C T K L V R P K R K H

Pst I

GGACCAAGTCGGCCAGGAGGAGCTGGCCAGGGCGGGCTGGTTACTGAACCTGCAGCATTGACATTGGGAGCACAGATCGGAGAGGGAG 990  
G T K S A E E E L A R A G W L L N L O H L T L G A D I G E G

Pst I

Stu I

AQTTGGAGCTCTGCAGGGTCACTGGGCAAAAGGTGGCCGTGAAGAATATCAAGTGTGATGTGACAGCCCAGGGCTTCTGG 1080  
E F G A V L Q G E Y L G Q K V A V K N I K C D V T A Q A F L TK

ACGAGACGGCCGTATGACCAAGATGCAACACGGAGAACCTGGTEGGTCTCTGGGGGTGATCCTGCACCAAGGGCTGTACATTGTGATGG 1170  
D E T A V M T K M Q H E N L V R L L G V I L H Q G L Y I V M

Sma I

Pst I

AGCACGTGAGCAAGGGCAACCTGGTGAACCTTCTGCCGACCCGGGGTCAACACCCCTCGTAAGCTCCTGCAGTTTCTCTGC 1260  
E H V S K G N L V N F L R T R G R A L V N T A Q L L O F S L

FIGURE 1A

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HinD III

ACCTGGCCGAGGGCATGGAGTACCTGGAGAGCAAGAACCTTGACCGGCACCTGGCCCCCCCACATCCTGGTCTCACAGGACCTGG 1350  
H V A E G M E Y L E S K K L V H R D L A A R N I L Y S E D L

TGCCCAAGGTACCGACTTGGCCCTGGCAAAGCCGAGCGGAAGGGCTAGACTCAAGCCGGCTGGGGCTCAAGTCGACGGGGGGAGG 1440  
Y A K Y S D F G L A K A E R K G Z D S S R L P V K W T A P E

Nde I

CTCTCAAACACGGAACTTCACCAGCAAGTCGGATGTCTGGAGTTTGGGTGCTCTGGAGGTCTTCTCATATGGACGGCTCCGT 1630  
A L K H G K F T S K S D V W S F G V L L W E V F S Y G R A P

Kpn I

ACCTAAAATCTCACTCAAACAGGTGTGGAGGGCGTGGACAAGGGTACCGCATGGAAACCCCCCGAGGGCTGTCCAGGGCCGTGGACCG 1620  
Y P K M S L K E V S E A V E K G Y R M E P P E G C P G P V H

Pvu II

TCTCTATGACCACCTGCTGGAGCCAGACCCCCGGCCACCCCTCCGCAAACCTGGCCGAGAACGCTGGCCGGAGCTACGGAGTC 1710  
Y L M S S C W E A E P I A R R P P F R K L A E K L I A R E L R S.

CACGTCCCCAGCCTCCGTCTCAGGGCAGGACGCCACGGCTCCACCTGGCCCCGAAGCCAGGAGCCCTGACCCATCCGCTGGGGCCCT 1800  
A G A P A S V S G Q D A D G S T S P R S O E P .

TGGCCCCAGAGGACCGAGAGACTGGAGACTGGGGCTGGGGCCACTGACCAGGCCAAGGAGGGTCCAGGCCCCAAGTCATCCTCTGG 1890

TCCCCACACCAAGGGCTGGCCACCTAGGGGGCTGGGGCCCCGGACACCCAGACCTGGAAAGCATGATGGCCATAAAAGACGG 1880

ATTCTAAGGACTCTAAAAAA 2000

Sma I

FIGURE 1B

**CCGCTTTTGCTTAGAGCTTGA**GAGTCAAAG

**CCCACATGTATACTTCGGCTCTAGCGAGT**

TCATAATATGGATACAG  
M D T 126509

AAATCTATTCTAGAAGAACCTCTTCTCAAAAGATCACAGCAAAAGAAGAAAATGTCACCAAATAATTACAAAGAACGGCTTTGTTTG 180  
K S I L E E L L K R S Q Q K K M S P N , N Y K E R L F V L

ACCAAAACAAACCTTCCTACTATGAATATGACAAAATGAAAAGGGGCAGCAGAAAAGGATCCATTGAAATTAGAAAATCAGATGTGTG 270  
T K T N L S Y Y E Y D K M K R G S R K G S I E I K K I R C V

**GAGAAAGTAAATCTCGAGGAGCAGACGCCTGTAGAGAGACAGTACCCATTCA**GATTGTCTATAAAGATGGGCTTCTCTATGTCTATGCA 360  
E K V N L E E Q T P V E R Q Y P F Q I V Y K D G L L Y V Y A

TCAAATGAAGAGAGCCGAAGTCAGGGTTGAAAGCATTACAAAAAGAGATAAGGGGTAAACCCCCACCTGCTGGTCAAGTACCATAGTGGG 450  
S N E E S R S O V L K A L Q K E I R G N P H L L V K Y H S G

**TTCTTGTGGACGGGAAGTTCTGTGTTGCCAGCAGAGCTGTAAAGCAGCCCCAGGATGTACCCCTCTGGGAAGCATATGCTAATCTGCAT** 540  
**E E Y D G K E I S C Q Q S E K A A P G C T L W E A Y A N L H**

ACTGGAGTCAATGAAAGAGAAAACACAGAGTTCCCACCTTCCCAGACAGAGTGTGAAGATAACCTCGGGCAGTTCCCTGTTCTCAAAATGGAT 630

T A V N E E K H R V P T F P D R V L K I P R A V P V L K H D

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A Q Y D S N S K K I Y G S Q P N F N M Q Y I P R E D F P D W

**TGGCAAGTAAGAAAACTGAAAAGTAGCAGCAGCAGTGAAGATGTTGCAAGCAGTAACCAAAAAAGAAAGAAATGTGAATCACACCACCTCA** 90C

W D V R K L K S S S S E U V A S S N D K E K N V N H I S

AACATTCAATGGGAATCCCCGAGTCAAGTCATCTGAAGAAGAGGAAACCTGGATCAATTGACTGGTTTGCTGGTAACATCTTCTAGA 590  
K I S V E E R F S S F E F N I D D Y R W F A C N I S P

TCAGTATGCTAACAGCTTACTGAGAGAAAACGGAAAGAAGGATTATGCTTACAAATTGGACCCGAAGTGCGAAATGTACAGAGCTCTGC 108

S Q S E Q L L R Q K G K E G A F M V R N S S Q V G M Y T V S

**TTTTTAGTAAGGCTGTGAATGATAAAAAGGAACGTCAAACATTACCACGTGCATAAAATGCTGAGAACAAATTACCTGGCAGAA** 117

Digitized by srujanika@gmail.com

N Y F E D S I P K I I H Y H O H N S A G M I T R I S H P Y S

ACAAAGGGAAACAAGCTCCCCACTCTGTGTCCCTGGGAAATGGAATCTGGGAAGTAAAAAGAGAAGAGATTACCTTGTTGAAGGAGCTG 139

T K A N K V P D S V S L G N G I W E L K R E E I T L L K E L

- GGAAGTGGCCAGTTGGAGTGGTCCAGCTGGGCAAGTGGAAAGGGGCAGTATGATGTTGCTGTTAAGATGATCAAGGAGGGCTCCATGTCA 14

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Digitized by srujanika@gmail.com

E D E F F Q E A Q T M M K L S H P K L V K F Y G V C S K E Y

CCCATATACATAGTGAATATATAAGCAATGGCTGCTTGCTGAATTACCTGAGGAGTCACGGAAAAGGACTTGAACCTTCCCAGCTC 16

P I Y I V T E Y I S N G C L L N Y L R S H G K G L E F S D E

TTAGAAATGTGCTACGATGTCGTGAAGGCATGGCCTCTTGGAGAGTCACCAATTACACCGGGACTGGCTGTCGTAACCTGTTG

Digitized by srujanika@gmail.com

V D R D L C V K V S D F G M T R Y V L D D Q Y V S S S V G T K

## **FIGURE 2A**

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TTTCCAGTCAGTGGTCAGCTCCAGAGCTTTCAATTCAAATACAGCAGCAAGTCAGACGTATGGCATTGGATCCTGATGTGG 1890  
F P V K W S A P E V F H Y F K Y S S K S D V W A F G I L M W  
  
GAGGTGTTCAGCCTGGGAAGCAGCCCTATGACTTGTATGACAACCTCCAGGTGGTCTGAAGGTCTCCAGGCCACAGGCTTACCGG 1980  
E V F S L G K O P Y D L Y D N S Q V V L K V S Q G H R L Y R  
  
CCCCACCTGGCATCGGACACCACCTACCAAGATCATGTACAGCTGCTGGCACCGAGCTCCAGAAAAGCGTCCCACATTCACTCCTG 2070  
P H L A S D T I Y Q I M Y S C W H E L P E K R P T F Q O L L  
  
TCTTCCATTGAACCACTCGGAAAAAGACAAGCATTGAAGAAGAAATTAGGAGTGCTGATAAGAATGAATAGATGCTGCCACATT 2160  
S S I E P L R E K D K H .  
  
TTCATTCACTTAAGGAAAGTAGCAAGGCATAATGTAATTAGCTAGTTTAATAGTGTCTCTGTATTGTCTATTAGAAATGAA 2250  
CAAGGCAGGAAACAAAAGATTCCCTGAAATTAGGTCAAATTAGTAATTGTTATGCTGCCCTGATATAACACTTCCAGCCTATA 2340  
GCAGAACGCACATTTCAACTGCAATATAGAGACTGTGTTCATGTGTAAAGACTGAGCAGAACTGAAAAATTACTTATTGGATATT CATT 2430  
CTTTCTTATATTGTCAACAAATTAAATACTACCAAGTACAAAAAAAAAAAAAAA 2500

FIGURE 2B

CGGGACTGGTCAAAGACAGGAACAGACTTCAAACACGGGGAGAGCTCCGGCGAAACGAAGACGTGGAGGTTTACCAAGGCATAAGAAC 90  
 AAAAGACACCTTCCTAGTCAGCAGCTGCCAGCTCTGCTCAGTTGCCTGGGTAGCACCTCCAGCCACAGAAAGCAAGCCCGTAAG 180  
 TCTCTCCAGTAGGACTTGCTGCAACCCAGCTGGACTCATCTGAAACGGACTTGCAACTCTCCGAAGTATGGTAGTTGGCTCT 270  
 M V S W C

GACTTCAAAGTTGCCTGGTGAAGGAAGATAAGGTGGATCGCAGAGACTAAGGGAGAGGGAGAAGCCCTGCTCTTCCCCACCAAG 360

GCACAA↑TCAACATCTGTCAAGGGCTGGAGTACCTAGAACCTATCTCCCCTGTTGTCACGGAGGCAGACAAGTCAACCGTCA 450  
 M S N I C O R L W E Y L E P Y L P C L S T E A D K 8 T V

TTGAAAATCCAGGGCCTTCCTCTCCCCAGTCACAGAGGCATGGCCACTACTTGCTGGCTTGTGATTACCAAGGCTGGACTGCTG 540  
 I E N P G A L C S P O S O R H G H Y F V A L F D Y Q A R T A SH3

AGGACTTGAGCTCCGAGCAGGTGACAAACTCAAGTCTGGACACTTGATGAGGGCTGGCTTGCAGACACTTGAGGAAAAGAC 630  
 E D L S F R A G D K L O V L D T L H E G W W F A R H L E K R

CACATGGCTCCAGTCAGCAACTACAAGGCTATTCCTTAACACTACGGCTGAGGACAGAACGCTACAGGCAGACCCGTGGTCTTG 720  
 R D G S S Q O L Q G Y I P S N Y V A E D R S L Q A E P W F F

GACCAATCGGAAGATCAGATGGAGAAACAATTATTCAGAAAACAAGACCCGTTCTTAACATCAGAGAAAGTGAAGCCAAA 810 SH2

AAGGAGAATTCTCTCTTCAAGTTAGATGGAGCAGTTGAGGAAACTACAGAATTAAAGACTGGATGAAGGGGATTTTCTCACGC 900  
 K G E F S L S V L D G A V V K H Y R I K R L D E G G F F L T

GAAGAAGAATCTTCAACACTGAACGAAATTGAGCCACTACACCAAGACAACTGACGGCCTGTTGCAAGCTGGAAACCCTGCT 990  
 R R R I F S T L N E F V S H Y T K T S D G L C V K L G K P C

TAAAGATCCAGGTCCAGCTCCATTGATTTGCTGTATAAAACCGTGGACCAATGGAGATAGACCGCAACTCCATACAGCTCTGAAGC 1080  
 L K I Q V P A P F D L S Y K T V D Q W E I D R N S I O L L K

CATGGGATCTGGTCAAGTTGGCAAGTATGGGAAGGTCTGTGGAAACAATACCAACTCCAGTAGCAGTGAACATTTACAGCTCAA 1170  
 R L G S G Q F G E V W E G L W N N T T P Y A V K T L K P G S

TGGATCCAATGACTCCTGAGGGAGGCACAGATAATGAAGAACCTAACAGCTTATCCAGCTTATGCTGGACTTTAG 1260  
 M D P N D F L R E A Q I M K N L R H P K L I Q L Y A V C T L

AAGATCCAATTATATTACAGAGTTGAGACATGGAACTGCAAGAATCTCCAAATGACACTGGATCAAAATCCATCTGA 1350 TK  
 E D P I Y I I T E L M R H G S L Q E Y L O N O T G S K I H L

CTCAACAGGTAGACATGGGGCACAGGTTGCCTCTGGATGGCTATCTGGAGTCTGGAACTACATTACAGAGATCTGGCTGCCAGAA 1440  
 T Q O V D M A A Q V A S G M A Y L E S R N Y I H R O L A A R

ATGTCTCTGGTGAACATAATATCACAAAGTAGCAGATTGGACTTGCCAGAGTTTAAGGTAGATAATGAAGACATCTATGAAT 1530  
 N Y L V G E H N I Y K V A D F G L A R V F K V D N E D I Y E

CTAGACACGAAATAAGCTGCCGGTGAAGTGGACTGCCCGAAGCCATTGCTAGTAATAAATTCAAGCTTACAGAGATCTGGCT 1620  
 S R H E I K L P V K W T A P E A I R S N K F S I K S D V W S

TTGGAATCCTCTTATGAAATCATTACTATGGAAAATGCCTTACAGTGGTATGACAGGTGCCAGGTAAATCCAGATGTTGGCTCAA 1710  
 F C I L L Y E I I T Y G K M P Y S G M T G A O V I Q M L A O

ACTATAGACTCCGCAACCCTAACACTGTCCACAGCAATTACAACATCATGTTGGAGTGTGGATGCAGAGCCTAACCGAACCTA 1800  
 N Y R L P Q P S N C P O Q F Y N I M L E C W N A E P K E R P

FIGURE 3A

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CATTTGAGACACTGC~~G~~TGGAAACTGAAGACTATTTCAAACAGACTCTTCATATTCAAGATGCAAAATAACTCATAAGATGAACACTGG 1890  
T F E T L R W K L E D Y F E T D S S Y S D A N N F I R .  
AGAAGAATATCAAATAATAAGTAGCAAACAAATTCAAATAATCCATTCAAACAAATACAATGTTATCAACCAACTGCACAACTCAGTTAT 1880  
CCTCACATATTCAAGTGTAGGATAAAAGTTGCCATGTATTATGAAAAAGATTATTTGTGCATTTATTGACTGGCAACACTGCAGGAC 2070  
AGTCAGGTCATATATAATTGCTCACTGCCTGGAAAATTAAAGCACACTAAACCAAGTTATTTCTTTAAGAGATACTTACATTTCCA 2160  
TTTATTGTTGAAATGTCGCATCAAGAGAAATCAACAGATGATAGTCCAATTTACTCACTGACTGTGTAGCATTTCTGTTAC 2250  
TGATTAGACTGGTTATTCAATTCTCAGATTGCTGAATCCCATCAGGCTGTTATTATGAGGAATTGATTGCTTGCACAGCAG 2340  
GACCTGTGCTTGAGATTTCTCTTTAAATATCCTGTAACATACAATGATGGTAAAGCCATGTTAAATGACTTCAATTGACTTG 2430  
CACTAATTGCACATTTCTATGCATAAAAAAATGATGCAGCTGTTGAGAAAACGAAGTCTTTCATTTGAGAAGGAAATGATGG 2520  
AATTTCTGTACTTCAGTATGTGTCACGTGAGAGTCATATACATTAGTTTAATCTCTTAATATTGAGAATCAGGTTGCAAAACGGATG 2610  
AGTTATTATCTATGCAAATGTGAGAAATGCTAACAGCCCATAAAAGTCTGAGAAATAGGTATCAAAATAGTTAGGAAATGAGAGGA 2700  
ACAGTAGGATTGCTGTGGCTAGACTTCTGAGTAATTAAAGAAAAAGAAGTACCAAAAAAAAAAAA 2770

FIGURE 3B

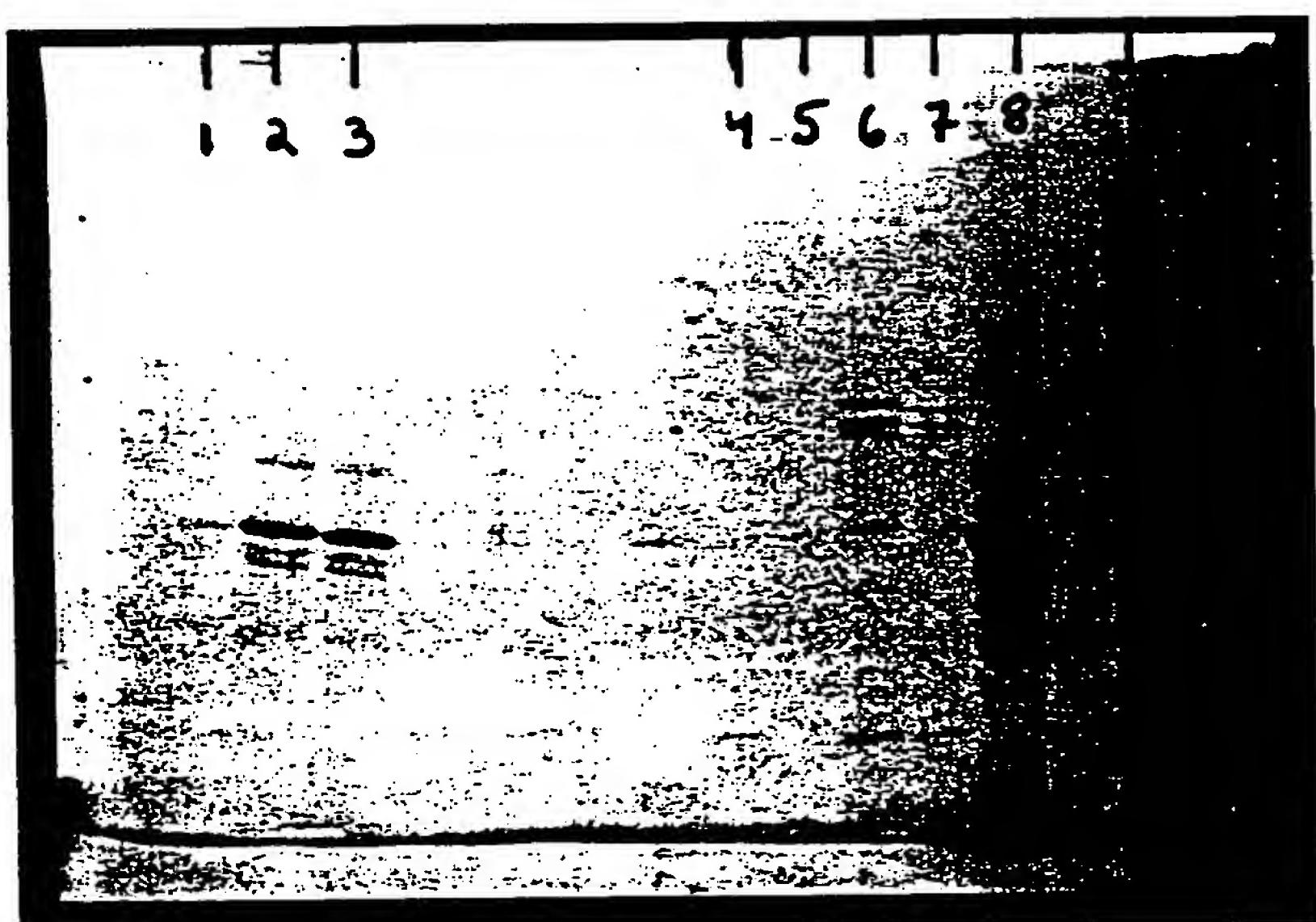
# Expression of MKK1 and MKK2

		<u>MKK1</u>	<u>MKK2</u>
	<b>Human</b>		
Meg/Eryth	<b>Meg-01</b>	+++	+++
	<b>K562</b>	++	+
	<b>Mo7e</b>	++	+
	<b>HEL</b>	+++	++
Myelo/Mac	<b>KG-1</b>	+	++
	<b>HL-60</b>	+	+
	<b>TF-1</b>	+	+
B-cell	<b>ALL-1</b>	-	+
	<b>Raji</b>	-	-
	<b>Daudi</b>	-	-
T-cell	<b>Molt-3</b>	-	-
	<b>Jurkat</b>	-	-
Epithelial	<b>Hela</b>	-	-
	<b>Rodent</b>		
	<b>BM</b>	+	+++
	<b>Spleen</b>	+++	+
	<b>Thymus</b>	-	-
	<b>Liver</b>	-	-
	<b>Brain</b>	+	-
rat neural	<b>P19</b>	+	-

FIGURE 4

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**Immunoprecipitation Of In Vitro Transcribed  
Translated MKK1 And MKK2 Proteins**



**FIGURE 5**

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## Antisense MKK1 Expression Suppresses AChE Production In Primary Murine Bone Marrow Cultures

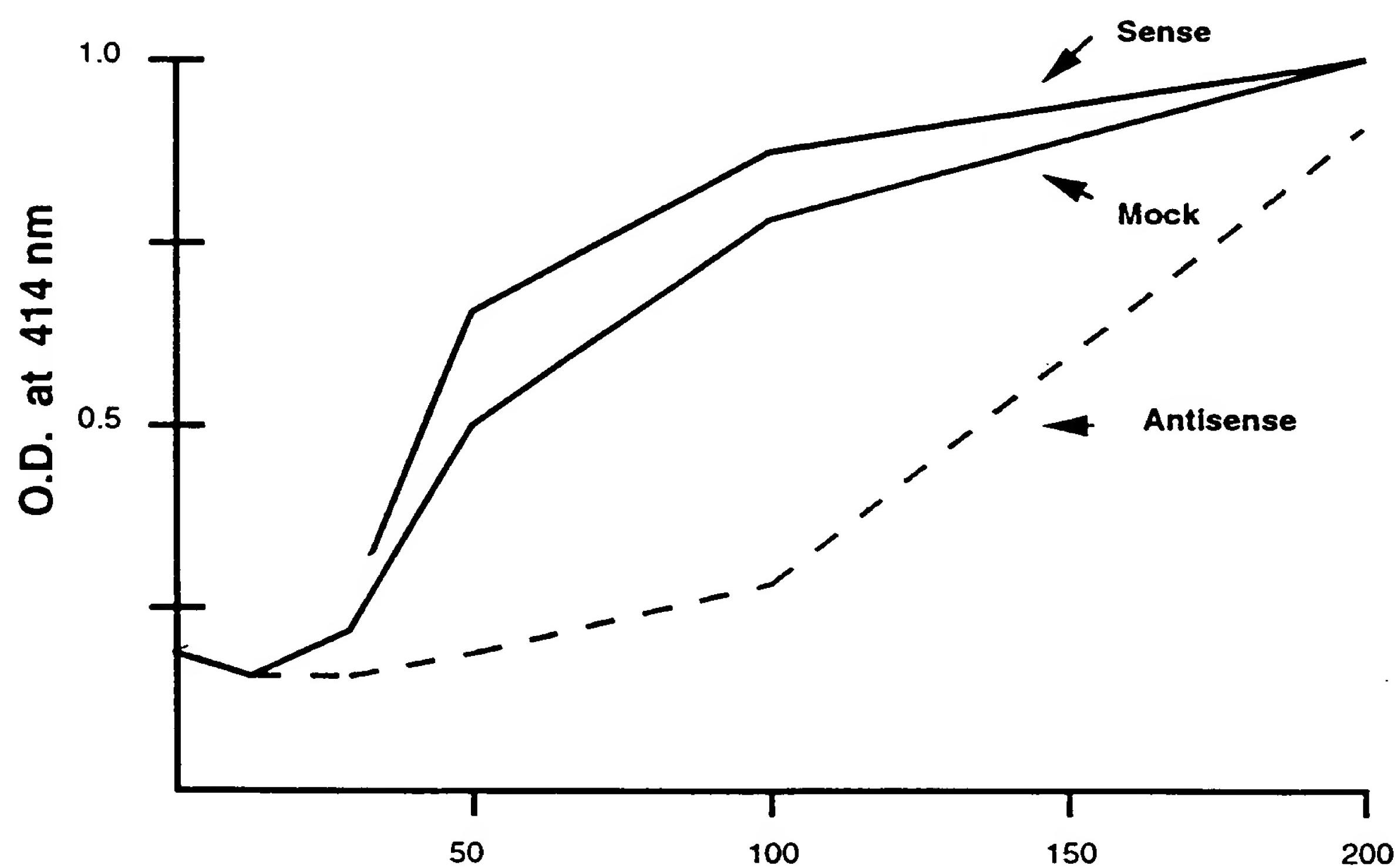


FIGURE 6A

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Cell Number  $\times 10^3/200 \mu\text{l}$

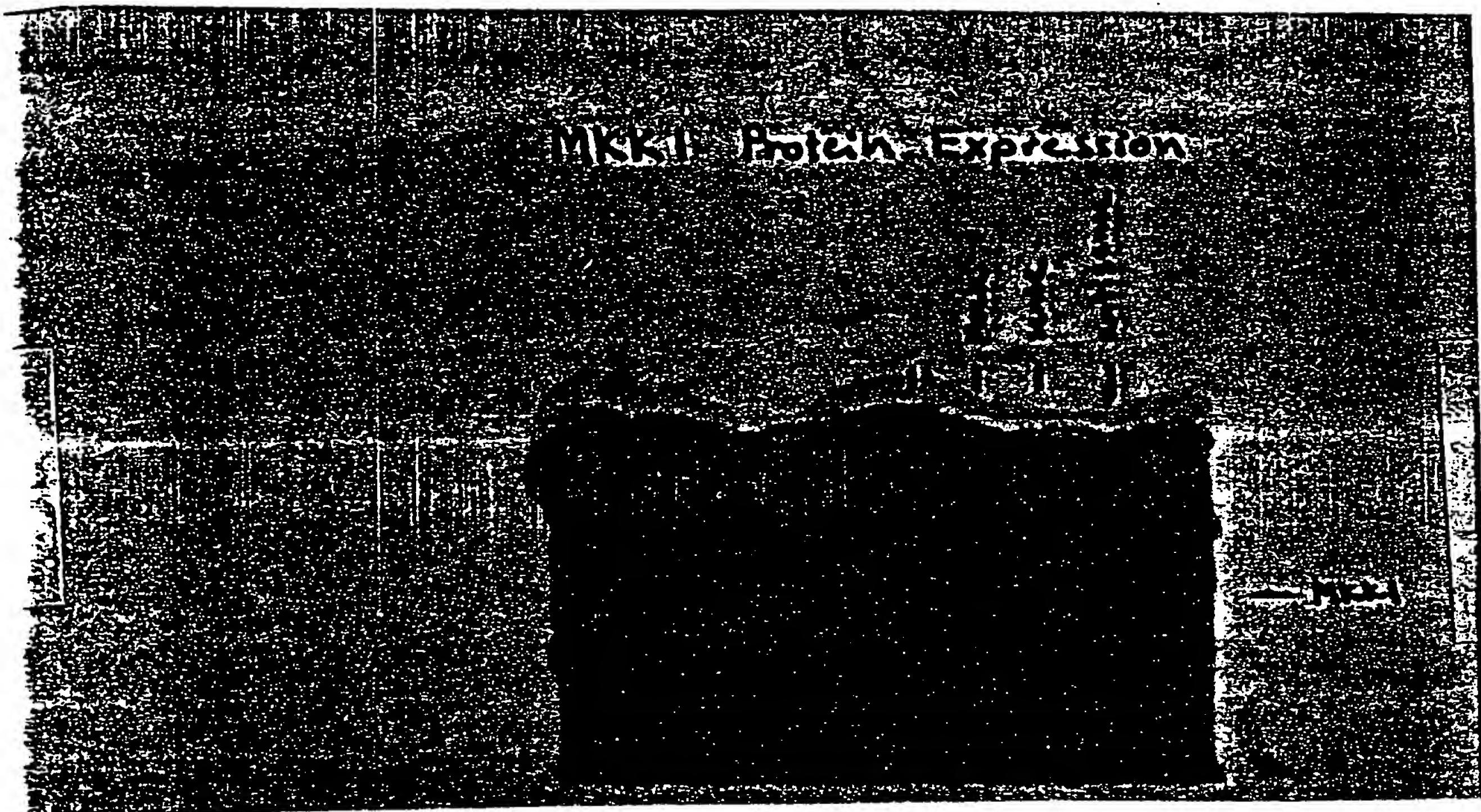


FIGURE 6B

MKK2 AND MKK3 AUTOPHOSPHORYLATE  
TRANSPHOSPHORYLATE PROTEINS WHEN EXPRESSED IN BACTERIA

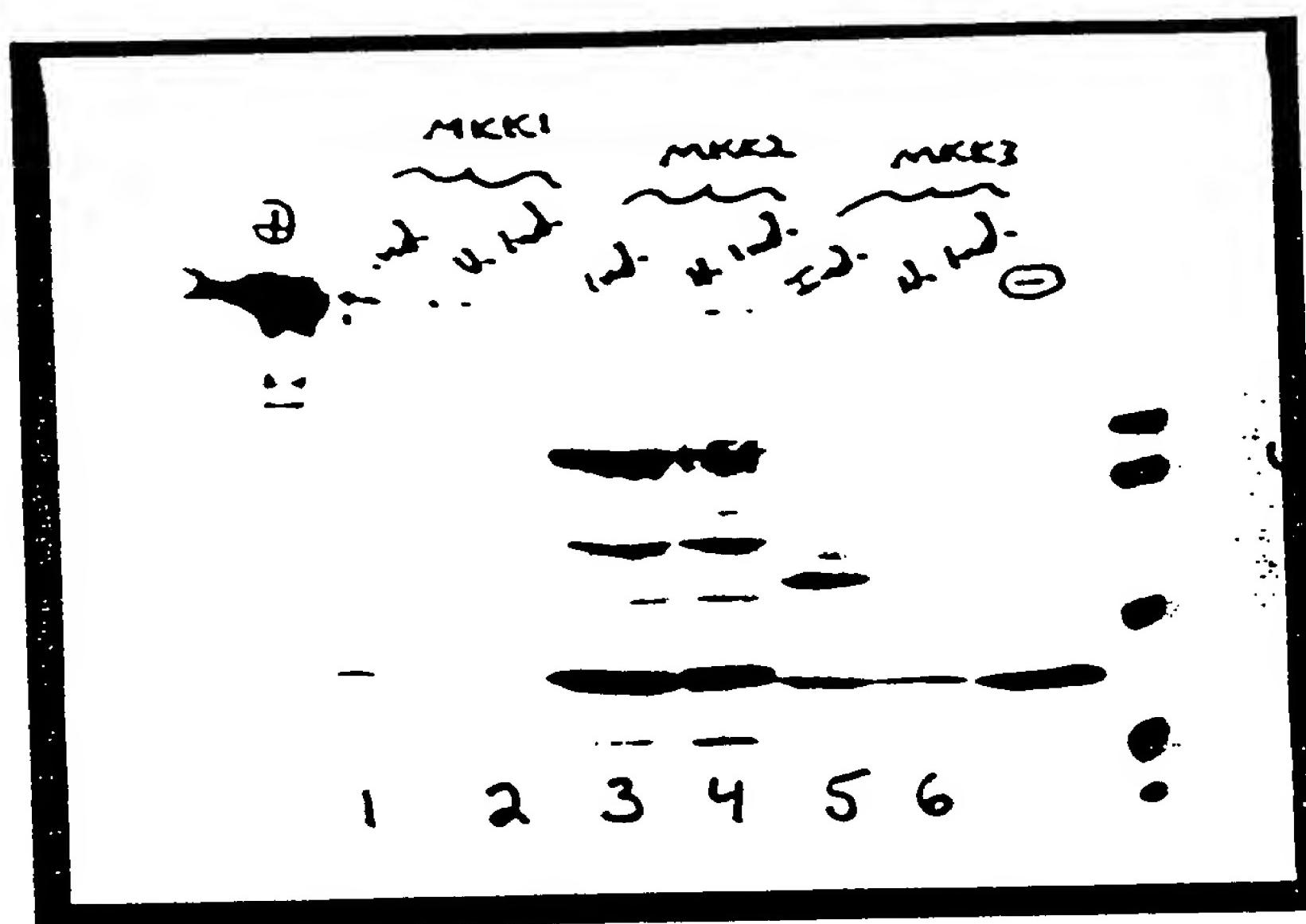


FIGURE 7

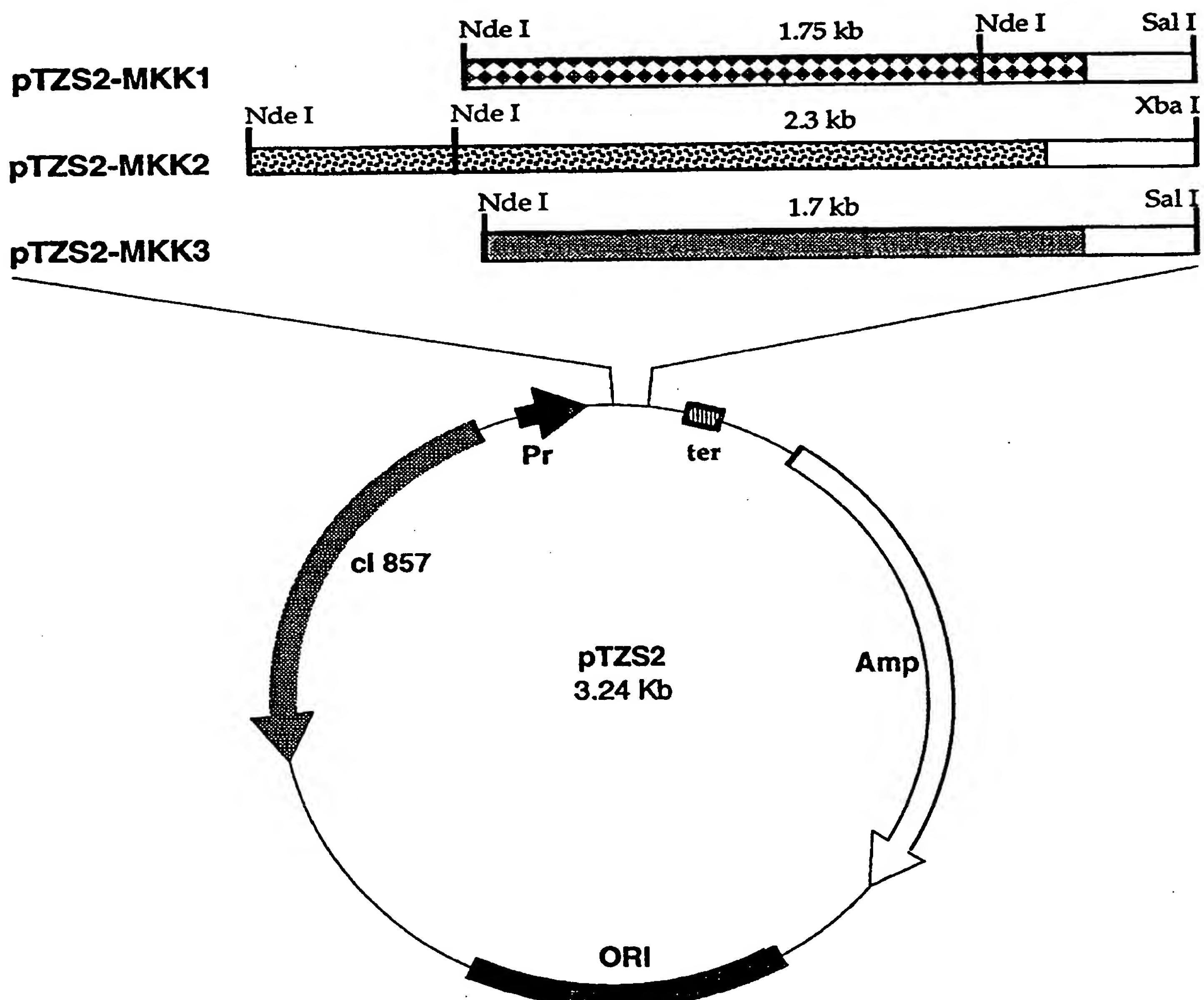


FIGURE 8

1	MAGRGSLVSWRAFHGCDSAEEELPRVSPRF	MKK1 aa
1	MSAIQAA-----	hCSK (JH0559)
31	RAWHPPPVSVARMPTTRRWAPGTOCITKCEHT	MKK1 aa
8	-----WPSGTTECIAKYNFH	hCSK (JH0559)
61	RPKPGEЛАFRKGDVVTILEACENKSWYRVK	MKK1 aa
22	GTAEQDLPFCKGDVLTVAVTKDPNWYKAK	hCSK (JH0559)
91	HHTSGOEGLLAAGALREREALSAADPKLSLM	MKK1 aa
52	NKV-GREGIIPANYVQKREGGVKAAGTKLSSL	hCSK (JH0559)
121	PWFHGKISGOEAVOOLOPPEDGLFLVRESA	MKK1 aa
81	PWFHGKITREQAERLLYPPEETGLFLVREST	hCSK (JH0559)
151	RHPGDDYVLCVSFGRDVIHYRVLHRDGHLTI	MKK1 aa
111	NYPGDYTLCSVSCDGKVEHYRIMYHASKLSSI	hCSK (JH0559)
181	DEAVFFCNLMDMVEHYSKDKGAICTKLVRP	MKK1 aa
141	DEEVYEEENLMQLVEHYTSDAADGLCTRLIK	hCSK (JH0559)
211	KRKHGTTKSAEEELARAGWLNLNLOHLTG	MKK1 aa
171	KVMEGTVAQQDEFYRSGWALNMKELKLLQT	hCSK (JH0559)
241	IGEGEFGAVLOGEYLGOKVAVKNIKCDVTA	MKK1 aa
201	IGKGEFGDVMLGDYRGNKVAVKCICKNDATA	hCSK (JH0559)
271	QAFLDETAVMTKMOHENLVRLLGVLHO--	MKK1 aa
231	QAFLAEEASVMTQLRHNSNLVQLLGVIIVEEK	hCSK (JH0559)
299	GLYIVMEHVSKGNLVNFLRTGRGRALVNTAQ	MKK1 aa
261	GLYIVTEYMAKGSLVDYLRSRGRSVLGGDC	hCSK (JH0559)
329	LLOFSLHVVAEGMEYLESKLVLHRDLAARNI	MKK1 aa
291	LLKFSLDVCEAMEYLEGNNFVHRDLAARNV	hCSK (JH0559)
359	LVSEDLVAKVSDFGLAGAKAERKGLDSSRLPV	MKK1 aa
321	LVSEDNVAKVSDFGLTKEASSTQDTGKLPV	hCSK (JH0559)
389	KWTAPEALKHGKFTSKSDVWSFGVLLWEVF	MKK1 aa
351	KWTAPEALREKKFSTKSDVWSFGILLWEIY	hCSK (JH0559)
419	SYGRAPYPKMSLKEVSEAVEKGYRMEPPEG	MKK1 aa
381	SFGRVVPYPRIPLKDVVPRVEKGYKMDAPDG	hCSK (JH0559)
449	C PG P V H V L M S S C W E A E P A R R P P F R K L A E K L	MKK1 aa
411	C P P A V Y E V M K N C W H L D A A M R P S F L Q L R E Q L	hCSK (JH0559)
479	A REL RSAGAPASVSGODADGSTSPRSOEP	MKK1 aa
441	E H -----IKTHELH-----L	hCSK (JH0559)

FIGURE 9

1	M D T K S I L E E L L L K R S Q Q K K K M S P N N Y K E R L	MKK2 aa
1	M A A - V I L E S I F L K R S Q Q K K K T S P L N F K K R L	hAtk (X58957)
1	M N N F I L L E E Q L I K K S Q O O K R R T S P S N E K V R F	hTKT (L10717)
1	M M V - - - - -	mTec (X5663)
31	F V L T K T N L S Y Y E - - Y D K M K R G S R K G S I E I K	MKK2 aa
30	F L L T V H K L S Y Y E Y D F E R G R R G S K K G S I D V E	hAtk (X58957)
31	F V L T K A S L A Y F E D R - - H G K K R T L K G S I E L S	hTKT (L10717)
4	- - - - -	mTec (X5663)
59	K I R C V E K V N L E E Q T P V E R Q - - - - -	MKK2 aa
60	K I T C V E T V V P E K N P P P E R O I P R R G E E S S E M	hAtk (X58957)
59	R I K C V E I V K S D - - - - -	hTKT (L10717)
4	- - - - -	mTec (X5663)
78	- - - - - Y P F Q I V Y K D G L L Y V Y A S N E E	MKK2 aa
90	E Q I S I I E R F P Y P F Q V V Y D E G P L Y V F S P T E E	hAtk (X58957)
70	- - I S I P C H Y K Y P F Q V V H D N Y L L Y V F A P D R E	hTKT (L10717)
4	- - - - - S F P V K I N F H S S P - - - - - Q	mTec (X5663)
98	S R S Q W L K A L Q K E I R G N P H L L V K Y H S G F F V D	MKK2 aa
120	L R K R W I H Q L K N V I R Y N S D L V Q K Y H P C F W I D	hAtk (X58957)
98	S R Q R W V L A L K E E T R N N N S L V P K Y H P N F W M D	hTKT (L10717)
17	S R D R W V K K L K E E I K N N N N I M I K Y H P K F W A D	mTec (X5663)
128	G K F L C C Q Q S C K A A P G C T L W E A Y A N L H T A V N	MKK2 aa
150	G Q Y L C C S Q T A K N A M G C Q I L E N R N G S L K P G S	hAtk (X58957)
128	G K W R C C S Q L E K L A T G C A Q Y D - - - - - P	hTKT (L10717)
47	G S Y Q C C R O T E K L A P G C E K Y N L F E S S I - - -	mTec (X5663)
158	E E K H R V P T F P D R V L K I P R A V P V L K M D A P S S	MKK2 aa
180	S H R K T K K P L P P - - - T P E E D Q I L K K P L P P E	hAtk (X58957)
149	T K N A S K K P L P P - - - T P E D N R - - - - - hTKT (L10717)	
73	- - - - - R K T L P P - - - A P E - - - I K K R R P P - mTec (X5663)	
188	S T T L A Q Y D N E S K K N Y G S Q P P S S S T S L A Q Y D	MKK2 aa
206	P A A A P V S T S E L K K - - - - - V V A L Y D	hAtk (X58957)
166	- - - R P L W E P E E T V - - - - - V I A L Y D	hTKT (L10717)
89	P P I P P E E E N T E E I - - - - - V V A M Y D	mTec (X5663)
218	S N S K K I Y G S Q P N F N M Q Y I P R E D F P - D W W Q V	MKK2 aa
225	Y M P M N A N D L O L R K G D E Y F I L E E S N L P W W R A	hAtk (X58957)
182	Y Q T N D P Q E L A L R R N E E Y C L L D S S E I H W W R V	hTKT (L10717)
108	F Q A T E A H D L R L E R G Q E Y I I L E K N D L H W W R A	mTec (X5663)
247	R K L K S S S S S E D V A S S N Q K E R N V N H T T S K I S	MKK2 aa
255	R D - - K N G Q E G Y I P S N Y V T E - A - - - - - hAtk (X58957)	
212	Q D - - R N G H E G Y V P S S Y L V E K S - - - - - hTKT (L10717)	
138	R D - - K - - - - - - - - - mTec (X5663)	
277	W E F P E S S S S E E E E N L D D Y D W F A G N I S R S Q S	MKK2 aa
273	- - - - - E D S I E M Y E W Y S K H M T R S Q A	hAtk (X58957)
231	- - - - - P N N L E T Y E W Y N K S I S R D K A	hTKT (L10717)
141	- - - - - Y G W Y C R N T N R S K A	mTec (X5663)
307	E Q L L R Q K G K E G A F M V R N S S O V G M Y T V S L F S	MKK2 aa
292	E Q L L K O E G K E G G F I V R D S S K A G K Y T V S V F A	hAtk (X58957)
250	E K L L L D T G K E G A F M V R D S R T A G T Y T V S V F T	hTKT (L10717)
154	E Q L L R T E D K E G G F M V R D S S O P G L Y T V S L Y T	mTec (X5663)

FIGURE 10A

337	K - A V N D K K G T V K H Y H V H - - T N A E N K L Y L A E	MKK2 aa
322	K S T - G D P Q G V I R H Y V V - - C S T P Q S Q Y Y L A E	hAtk (X58957)
280	K A V V S E N N P C I K H Y H I K E T N D N P K R Y Y V A E	hTKT (L10717)
184	K F G - G E G S S G F R H Y H I K E T A T S P K K Y Y L A E	mTec (X5663)
364	N Y C F D S I P K L I H Y H Q H N S A G M I T R L R H P V S	MKK2 aa
349	K H L F S T I P E L I N Y H Q H N S A G L I S R L K Y P V S	hAtk (X58957)
310	K Y V F D S I P L L I N Y H O H N G G G L V T R L R Y P V C	hTKT (L10717)
213	K H A E G S I P E I I E Y H K H N A A G L V T R L R Y P V S	mTec (X5663)
394	T K A N K V P D S V S L G N G I W E L K R E E I T L L K E L	MKK2 aa
379	Q Q N K N A P S T A G L G Y G S W E I D P K D L T F L K E L	hAtk (X58957)
340	F G R O K A P V T A G L R Y G K W V I D P S E L T F V Q E I	hTKT (L10717)
243	T K G K N A P T T A G F S Y D K W E I N P S E L T F M R E L	mTec (X5663)
424	G S G Q F G V V Q L G K W K G Q Y D V A V K M I K E G S M S	MKK2 aa
409	G T G Q F G V V K Y G K W R G Q Y D V A I K M I K E G S M S	hAtk (X58957)
370	G S G Q F G L V H L G Y W L N K D K V A I K T I R E G A M S	hTKT (L10717)
273	G S G L F G V V R L G K W R A O Y K V A I K A I R E G A M C	mTec (X5663)
454	E D E F F Q E A Q T T M M K L S H P K L V K F Y G V C S K E Y	MKK2 aa
439	E D E F I E E A K V V M M N L S H E K L V Q L Y G V C T K Q R	hAtk (X58957)
400	E E D F I E E A E V M M K L S H P K L V Q L Y G V C L E Q A	hTKT (L10717)
303	E E D F I E E A K V V M M K L T H P K L V O L Y G V C T Q Q K	mTec (X5663)
484	P I Y I V T E Y I S N G C L L N Y L R S H G K G L E P S Q L	MKK2 aa
469	P I F I I T E Y M A N G C L L N Y L R E M R H R F Q T Q Q L	hAtk (X58957)
430	P I C L V F E F M E H G C L S D Y L R T Q R G L F A A E T L	hTKT (L10717)
333	P I Y I V T E F M E R G C L L N F L R Q R Q G H F S R D M L	mTec (X5663)
514	L E M C Y D V C E G M A F L E S H Q F I H R D L A A R N C L	MKK2 aa
499	L E M C K D V C E A M E Y L E S K O E L H R D L A A R N C L	hAtk (X58957)
460	L G M C L D V C E G M A Y L E E A C V I H R D L A A R N C L	hTKT (L10717)
363	L S M C Q D V C E G M E Y L E R N S F I H R D L A A R N C L	mTec (X5663)
544	V D R D L C V K V S D F G M T R Y V L D D Q Y V S S V G T K	MKK2 aa
529	V N D Q G V V K V S D F G L S R Y V L D D E Y T S S V G S K	hAtk (X58957)
490	V G E N Q V I K V S D F G M T R F V L D D Q Y T S S T G T K	hTKT (L10717)
393	V N E A G V V K V S D F G M A R Y V L D D O X T S S S G A K	mTec (X5663)
574	F P V K W S A P E V F H Y F K Y S S K S D V W A F G I L M W	MKK2 aa
559	F P V R W S P P E V L M Y S K F S S K S D I W A F G V L M W	hAtk (X58957)
520	F P V K W A S P E V F S F S R Y S S K S D V W S F G V L M W	hTKT (L10717)
423	F P V K W C P P E V E N Y S R F S S K S D V W S F G V L M W	mTec (X5663)
604	E V F S L G K Q P Y D L Y D N S Q V V L K V S Q G H R L Y R	MKK2 aa
589	E I Y S L G K M P Y E R F T N S E T A E H I A Q G L R L Y R	hAtk (X58957)
550	E V F S E G K I P Y E N R S N S E V V E D I S T G E R L Y K	hTKT (L10717)
453	E I F T E G R M P F E K N T N Y E V V T M V T R G H R L H R	mTec (X5663)
634	P H L A S D T I Y Q I M Y S C W H E L P E K R P T F Q Q L L	MKK2 aa
619	P H L A S E K V Y T I M Y S C W H E K A D E R P T F K I L L	hAtk (X58957)
580	P R L A S T H V Y Q I M N H C W K E R P E D R P A F S R L L	hTKT (L10717)
483	P K L A T K Y L Y E V M L R C W Q E R P E G R P S F E D L L	mTec (X5663)
664	S S I E P L R E K D K H	MKK2 aa
649	S N I L D V M D E E S	hAtk (X58957)
610	R Q L A E I A E S - - - G L	hTKT (L10717)
513	R T I D E L V E C E E T F G R	mTec (X5663)

FIGURE 10B

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aa

1	M S N I C Q R L W E - - - - -	K L T E E R D G S L N Q - - - - -	S	MKK3 MPI aa
1	M G C V Q C K D K E A - T - - -	K L T E E R D G S L N Q - - - - -	S	hFyn
1	M G C V H C K E K I S - G - - -	K G Q G G S G T G T P A - - - - -	H	cYrk
1	M G S N K S K P K D A - S Q R - -	R R S L E P A E N V H G - - - - -	A	hSrc
1	M G C I K S K E N K S - P A I - -	K Y R P E N T P E P V S - - - - -	T	hYes
1	M G C V F C K K L E P - V A T A K E	D A G L E G D F R S Y G - - - - -	G	hFgr
1	M G C I K S K G K D S L S D D G V D L	- K T Q P V R N T E R - - - - -	R	hLyn
1	M G S M K S K - - - F L Q V G G N T F	S K T E T S A S P H C - - - - -	C	hHck
1	M G C G C S S - - - H P E D D W M E N	I D V C E N C H Y - - - - -	Y	hLck
1	M G L L S S K R Q V S E K G K G W S P	V K I R T Q D K A P P - - - - -	P	mBlk
11	- - - - - - - - - - - - - - - - - - -	- - - - - Y L E P - - - - -	Y	MKK3 MPI aa
26	S G Y R Y G T D P T P Q H Y P S F G V T S I P N - - - - -	Y N N F - - - - -	F	hFyn
26	P P S Q Y D P D P T - Q L S G A F - - T H I P D - - - - -	F N N F - - - - -	F	cYrk
28	G G G A F P A S Q T P S K P A S A D G H R G P S A A F A P A	- - - - -	A	hSrc
28	S V S H Y G A E P T T V S P C P S S S A K G T A V N F S S L	- - - - -	S	hYes
30	A A D H Y G P D P T K A R P A S - S F A H I P N - - - - -	Y S N E - - - - -	E	hFgr
30	T I Y V R D P T T S N K O Q R P V P E S Q L L P G Q R F Q T K	- - - - -	K	hLyn
28	P V Y V P D P T S T I K P G P N S H N S N T P G I R - - - - -	- - - - -	R	hHck
26	P I V P L D G K G T L L I R N G S E V R D - P L V T Y E G S	- - - - -	S	hLck
31	P L P P L V V F N H L A P P S P N Q - - - - - - - - - - -	- - - - -	P	mBlk
15	Y L P C L S T E A D K S T V I E N P G A L C S P Q S Q R H G - - - - -	MKK3 MPI aa		
54	H A A - - - G G Q G L T V F G G V N - - S S S H T G T L R T	hFyn		
51	H A A - - - A V S P P V P F S G P G F Y P C N T L Q A H S S	cYrk		
58	A A E P - - - - - K L F G G F N S S D T V T S P Q R A G	hSrc		
58	S M T P F G G S S G V T P F G G A S S S F S V V P S S Y P A	hYes		
57	S S Q A I N P G - - - - - F - - - - - - - L D S G T I R G	hFgr		
60	D P E E - - - - - Q G - - - - - - - - - - - - - - - - -	hLyn		
54	E A G S - - - - - E D - - - - - - - - - - - - - - - - -	hHck		
55	N P P A - - - - - S P L Q D - - - - - - - - - - - - - - -	hLck		
49	D P D E - - - - - E E - - - - - - - - - - - - - - - - -	mBlk		
45	H - - - - - Y F V A L F D Y Q A R T A E D L S F R A G D K - - - - -	MKK3 MPI aa		
79	R G G T G V T L F V A L Y D Y E A R T E D D L S F H K G E K	hFyn		
78	I T G G G G V T L F I A L Y D Y E A R T E D D L S F Q K G E K	cYrk		
81	P L A G G G V T T F V A L Y D Y E S R T E T D L S F K K G E R	hSrc		
88	G L T G G G V T I F V A L Y D Y E A R T T E D L S F K K G E R	hYes		
74	V S G I G V T L F I A L Y D Y E A R T E D D L T F T K G E K	hFgr		
66	- - - - - D I V V A L Y P Y D G I H P D D L S F K K G E K	hLyn		
60	- - - - - I I V V A L Y D Y E A I H H E D L S F Q K G D Q	hHck		
64	- - - - - N L V I A L H S Y E P S H D G D L G F E K G E Q	hLck		
55	- - - - - R F V V A L F D Y A A V N D R D L Q V L K G E K	mBlk		
69	L Q V L D T L H E G W W F A R H L E K R R D G S S Q Q L Q G - - - - -	MKK3 MPI aa		
109	F O I L N S S E G D W W W E A R S L T T G E T G - - - - -	hFyn		
108	F H I I I N N T E G D W W W E A R S L S S G A T G - - - - -	cYrk		
111	L Q I V V N N T E G D W W L A H S L S T G Q T G - - - - -	hSrc		
118	F O I I I N N T E G D W W W E A R S L I A T G K N G - - - - -	hYes		
104	F H I I L N N T E G D W W W E A R S L S S G K T G - - - - -	hFgr		
90	M K V L E E H - G E W W K A K S L L T K K E G G - - - - -	hLyn		
84	M V V L E E E S - G E W W K A R S L A T R K E G G - - - - -	hHck		
88	L R I L E Q S - G E W W K A Q S L T T G Q E G G - - - - -	hLck		
79	L Q V L R S T - G D W W L A R S L V T G R E G G - - - - -	mBlk		

## **FIGURE 11A**

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99	Y I P S N Y V A E D R S L Q A E P W F F G A I G R S D A E K	MKK3 MPI aa
132	Y I P S N Y V A P V D S I Q A E E W Y F G K L G R K D A E R	hFyn
131	Y I P S N Y V A P V D S I Q A E E W Y F G K I G R K D A E R	cYrk
134	Y I P S N Y V A P S D S I Q A E E W Y F G K I T R R E S E R	hSrc
141	Y I P S N Y V A P A D S I Q A E E W Y F G K M G R K D A E R	hYes
127	C I P S N Y V A P V D S I Q A E E W Y F G K I G R K D A E R	hFgr
112	F I P S N Y V A K L N T L E T E E E W F F K D I T R K D A E R	hLyn
106	X I P S N Y V A R V D S L E T E E E W F F K G I S R K D A E R	hHck
110	F I P F N F V A K A N S L E P E P W F F K N L S R K D A E R	hLck
101	X V P S N F V A P V E T L E V E K W F F R T I S R K D A E R	mBlk
129	Q L L Y S E N K T G S F L I R E S E S Q K G E F S L S V L D	MKK3 MPI aa
162	Q L L S F G N P R G T F L I R E S E T T K G A Y S L S I R D	hFyn
161	Q L L C H G N C R G T F L I R E S E T T K G A Y S L S I R D	cYrk
164	L L L N A E N P R G T F L V R E S E T T K G A Y C L S V S D	hSrc
171	L L L N P G N Q R G I F L V R E S E T T K G A Y S L S I R D	hYes
157	Q L L S P G N P Q G A F L I R E S E T T K G A Y S L S I R D	hFgr
142	Q L L A P G N S A G A F L I R E S E T L K G S F S L S V R D	hLyn
136	Q L L A P G N M L G S F M I R D S E T T K G S Y S L S V R D	hHck
140	Q L L A P G N T H G S F L I R E S E S T A G S F S L S V R D	hLck
131	Q L L A P M N K A G S F L I R E S E S N K G A F S L S V K D	mBlk
159	- - - - G A V V K H Y R I K R L D E G G F F L T R R R I F	MKK3 MPI aa
192	W D D M K G D H V K H Y K I R K L D N G G Y Y I T T R A Q F	hFyn
191	W D E A K G D H V K H Y K I R K L D S G G Y Y I T T R A Q F	cYrk
194	F D N A K G L N V K H Y K I R K L D S G G F Y I T S R T Q F	hSrc
201	W D E I R G D N V K H Y K I R K L D N G G Y Y I T T R A Q F	hYes
187	W D Q T R G D H V K H Y K I R K L D M G G Y Y I T T R V Q F	hFgr
172	F D P V H G D V I K H Y K I R S L D N G G Y Y I S P R I T F	hLyn
166	Y D P R Q G D T V K H Y K I R T L D N G G F Y I S P R S T F	hHck
170	F D Q N Q G E V V K H Y K I R N L D N G G F Y I S P R I T F	hLck
161	I T T - O G E V V K H Y K I R S L D N G G Y Y I S P R I T F	mBlk
184	S T L N E F V S H Y T K T S D G L C V K L G K P C L K I Q V	MKK3 MPI aa
222	E T L Q Q L V Q H Y S E R A A G L C C R L V V P C H K G M -	hFyn
221	D T I Q Q L V Q H Y I E R A A G L C C R L A V P C P K G T -	cYrk
224	N S L Q Q L V A Y Y S K H A D G L C H R L T T V C P T S K -	hSrc
231	D T L Q K L V K H Y T E H A D G L C H K L T T V C P T V K -	hYes
217	N S V Q E L V O H Y M E V N D G L C N L L I A P C T I M K -	hFgr
202	P C I S D M I K H Y Q K Q A D G L C R R L E K A C I S P K -	hLyn
196	S T L Q E L V D H Y K K G N D G L C Q K L S V P C M S S K -	hHck
200	P G L H E L V R H Y T N A S D G L C T R L S R P C Q T Q K -	hLck
190	P T L O A L V O H Y S K K G D G L C Q K L T L P C V N L A -	mBlk
214	P A P F D L S Y K T V D Q W E I D R N S I Q L L K R L G S G	MKK3 MPI aa
251	P R L T D L S V K T K D V W E I P R E S L Q L I K R L G N G	hFyn
250	P K L A D L S V K T K D V W E I P R E S L Q L L Q K L G N G	cYrk
253	P Q T Q G L A - - - K D A W E I P R E S L R L E V K L G Q G	hSrc
260	P Q T Q G L A - - - K D A W E I P R E S L R L E V K L G Q G	hYes
246	P Q T L G L A - - - K D A W E I S R S S I T L E R R L G T G	hFgr
231	P Q - - - K P W D K D A W E I P R E S I K L V K R L G A G	hLyn
225	P Q - - - K P W E K D A W E I P R E S L K L E K K L G A G	hHck
229	P Q - - - K P W W E D E W E V P R E T L K L V E R L G A G	hLck
219	P K - - - N L W A Q D E W E I P R Q S L K L V R K L G S G	mBlk

FIGURE 11B

244	Q F G E V W E G L W N N T T P V A V K T L K P G S M D P N D	MKK3 MPI aa
281	Q F G E V W M G T W N G N T K V A I K T L K P G T M S P E S	hFyn
280	Q F G E V W M G T W N G T T K V A V K T L K P G T M S P E A	cYrk
280	C F G E V W M G T W N G T T R V A I K T L K P G T M S P E A	hSrc
287	C F G E V W M G T W N G T T K V A V K T L K P G T M [M] P E A	hYes
273	C F G D V W L G T W N G S T K V A V K T L K P G T M S P K A	hFgr
257	Q F G E V W M G Y Y N N S T K V A V K T L K P G T M S V Q A	hLyn
251	Q F G E V W M A T Y N K H T K V A V K T M K P G S M S V E A	hHck
255	Q F G E V W M G Y Y N G H T K V A V K S L K Q G S M S P D A	hLck
245	Q F G E V W M G Y Y K N N M K V A I K T L K E G T M S P E A	mBlk
274	F L R E A Q I M K N L R H P K L I Q L Y A V C T L E D P I Y	MKK3 MPI aa
311	F L E E A Q I M K K L K H D K L V Q L Y A V V S - E E P I Y	hFyn
310	F L E E A Q I M K R L R H D K L V Q L Y A V V S - E E P I Y	cYrk
310	F L Q E A Q V M K K L R H E K L V Q L Y A V V S - E E P I Y	hSrc
317	F L Q E A Q I M K K L R H D K L V P L Y A V V S - E E P I Y	hYes
303	F L E E A Q V M K L L R H D K L V Q L Y A V V S - E E P I Y	hFgr
287	F L E E A N L M K T L Q H D K L V R L Y A V V T R E E P I Y	hLyn
281	F L A E A N V M K T L Q H D K L V K L H A V V T K E - P I Y	hHck
285	F L A E A N L M K Q L Q H Q R L V R L Y A V V T - Q E P I Y	hLck
275	F L G E A N V M K T L Q H E R L V R L Y A V V T R E - P I Y	mBlk
304	I I T E L M R H G S L Q E Y L Q N D T G S K I H L T Q Q V D	MKK3 MPI aa
340	I V T E Y M N K G S L L D F L K D G E G R A L K L P N L V D	hFyn
339	I V T E F M S Q G S L L D F L K D G D G R Y L K L P Q L V D	cYrk
339	I V T E Y M S K G S L L D F L K G E T G K Y L R L P Q L V D	hSrc
346	I V T E F M S K G S L L D F L K E G D G K Y L K L P Q L V D	hYes
332	I V T E F M C H G S L L D F L K N P E G Q D L R L P O L V D	hFgr
317	I I T E Y M A K G S L L D F L K S D E G G G K V L L P K L I D	hLyn
310	I I T E F M A K G S L L D F L K S D E G S K Q P L P K L I D	hHck
314	I I T E Y M E N G S L V D F L K T P S G I K L T I N K L L D	hLck
304	I V T E Y M A R G C L L D F L K T D E G S R L S L P R L I D	mBlk
334	M A A Q V A S G M A Y L E S R N Y I H R D L A A R N V L V G	MKK3 MPI aa
370	M A A Q V A A G M A Y I E R M N Y I H R D L R S A N I L V G	hFyn
369	M A A Q I A A G M A Y I E R M N Y I H R D L R A A N I L V G	cYrk
369	M A A Q I A S G M A Y V E R M N Y V H R D L R A A N I L V G	hSrc
376	M A A Q I A D G M A Y I E R M N Y I H R D L R A A N I L V G	hYes
362	M A A Q V A E G M A Y M E R M N Y I H R D L R A A N I L V G	hFgr
347	F S A Q I A E G M A F I E Q R N Y I H R D L R A A N V L V S	hLyn
340	F S A Q I A E G M A F I E Q R N Y I H R D L R A A N I L V S	hHck
344	M A A Q I A E G M A F I E E R N Y I H R D L R A A N I L V S	hLck
334	M S A Q V A E G M A Y I E R M N S I H R D L R A A N I L V S	mBlk
364	E H N I Y K V A D F G L A R V F K V D N E D I Y E S R H E I	MKK3 MPI aa
400	N G L I C K I A D F G L A R L I - - - E D N E Y T A R Q G A	hFyn
399	D N L V C K I A D F G L A R L I - - - E D N E Y T A R Q G A	cYrk
399	E N L V C K V A D F G L A R L I - - - E D N E Y T A R Q G A	hSrc
406	E N L V C K I A D F G L A R L I - - - E D N E Y T A R Q G A	hYes
392	E R L A C K I A D F G L A R L I - - - K D D E Y N P C Q G S	hFgr
377	E S L M C K I A D F G L A R V I - - - E D N E Y T A R E G A	hLyn
370	A S L V C K I A D F G L A R V I - - - E D N E Y T A R E G A	hHck
374	D T L S C K I A D F G L A R L I - - - E D N E Y T A R E G A	hLck
364	E T L C C K I A D F G L A R I - - - D S E Y T A Q E G A	mBlk

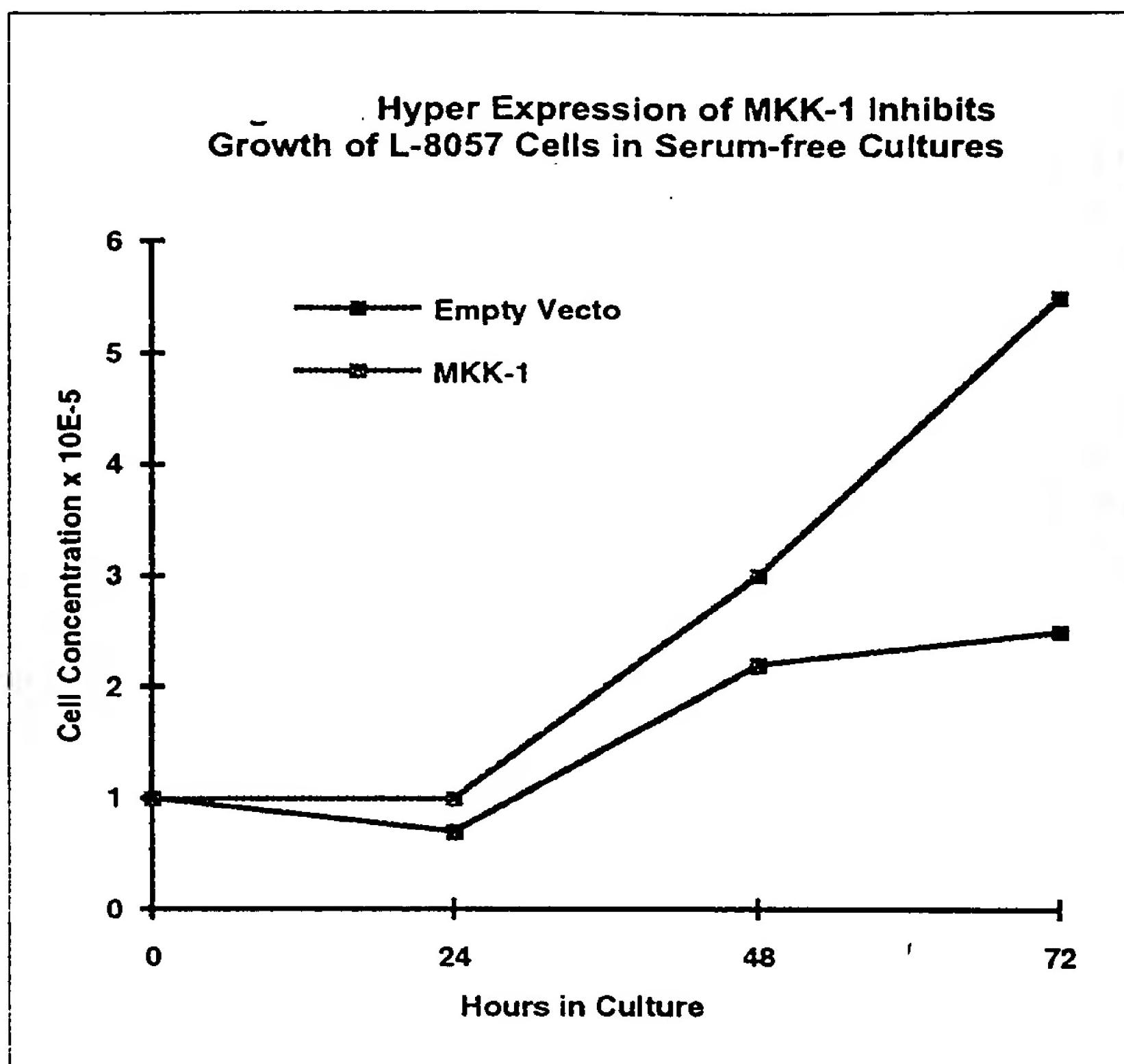
FIGURE 11C

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394	K L P V K W T A P E A I R S N K F S I K S D V W S F G I L L	MKK3 MPI aa
427	K F P I K W T A P E A A L Y G R F T I K S D V W S F G I L L	hFyn
426	K F P I K W T A P E A A L F G K F T I K S D V W S F G I L L	cYrk
426	K F P I K W T A P E A A L Y G R F T I K S D V W S F G I L L	hSrc
433	K F P I K W T A P E A A L Y G R F T I K S D V W S F G I L L Q	hYes
419	K F P I K W T A P E A A L F G R F T I K S D V W S F G I L L	hFgr
404	K F P I K W T A P E A I N F G C F T I K S D V W S F G I L L	hLyn
397	K F P I K W T A P E A I N F G S F T I K S D V W S F G I L L	hHck
401	K F P I K W T A P E A I N Y G T F T I K S D V W S F G I L L	hLck
390	K F P I K W T A P E A I H F G V F T I K A D V W S F G V L L	mBlk
424	Y E I I T Y G K M P Y S G M T G A Q V I Q M L A Q N Y R L P	MKK3 MPI aa
457	T E L V T K G R V P Y P G M N N R E V L E Q V E R G Y R M P	hFyn
456	T E L V T K G R V P Y P G M N N R E V L E Q V E R G Y R M Q	cYrk
456	T E L T T K G R V P Y P G M V N R E V L D Q V E R G Y R M P	hSrc
463	T E L V T K G R V P Y P G M V N R E V L E Q V E R G Y R M P	hYes
449	T E L I T K G R I P Y P G M N K R E V L E Q V E Q G Y H M P	hFgr
434	Y E I I V T Y G K I P Y P G R T N A D V M T A L S Q G Y R M P	hLyn
427	M E I I V T Y G R I P Y P G M S N P E V I R A L E R G Y R M P	hHck
431	T E I I V T H G R I P Y P G M T N P E V I Q N L E R G Y R M V	hLck
420	M V I I V T Y G R V P Y P G M S N P E V I R S L E H G Y R M P	mBlk
454	Q P S N C P Q Q F Y N - I M L E C W N A E P K E R P T F E T	MKK3 MPI aa
487	C P Q D C P I S L H - E L M I H C W K K D P E E R P T F E Y	hFyn
486	C P G G C P P S L H - D V M V Q C W K R E P E E R P T F E Y	cYrk
486	C P P E C P E S L H - D L M C Q C W R K E P E E R P T F E Y	hSrc
493	C P Q G C P E S L H - E L M N L C W K K D P D E R P T F E Y	hYes
479	C P P G C P A S L Y - E A M E Q T W R L D P E E R P T F E Y	hFgr
464	R V E N C P D E L Y - D I M K M C W K E K A E E R P T F D Y	hLyn
457	R P E N C P E E L Y - N I M M R C W K N R P E E R P T F E Y	hHck
461	R P D N C P E E L Y - Q L M R L C W K E R P E D R P T F D Y	hLck
450	C P E T C P P E L Y N D I I T E C W R G R P E E R P T F E F	mBlk
483	L R W K L E D Y F E - T D S S Y S D A N N F I R	MKK3 MPI aa
516	L Q S F L E D Y F T A T E P Q Y Q P G E N - - - L	hFyn
515	L Q S F L E D Y F T A T E P Q Y Q P G D N - - - Q	cYrk
515	L Q A F L E D Y F T S T E P Q Y Q P G E N - - - L	hSrc
522	I Q S F L E D Y F T A T E P Q Y Q P G E N - - - L	hYes
508	L Q S F L E D Y F T S A E P Q Y Q P G D Q - - - T	hFgr
493	L Q S V L D D F Y T A T E G Q Y Q Q - - Q - - P	hLyn
486	I Q S V L D D F Y T A T E S Q Y Q Q - - Q - - P	hHck
490	L R S V L E D F F T A T E G Q Y O P - - Q - - P	hLck
480	L Q S V L E D F Y T A T E G Q Y E L - - Q - - P	mBlk

FIGURE 11D

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**FIGURE 12**

### Growth Factor Response of MKK-1 Expressing L-8057 Cells

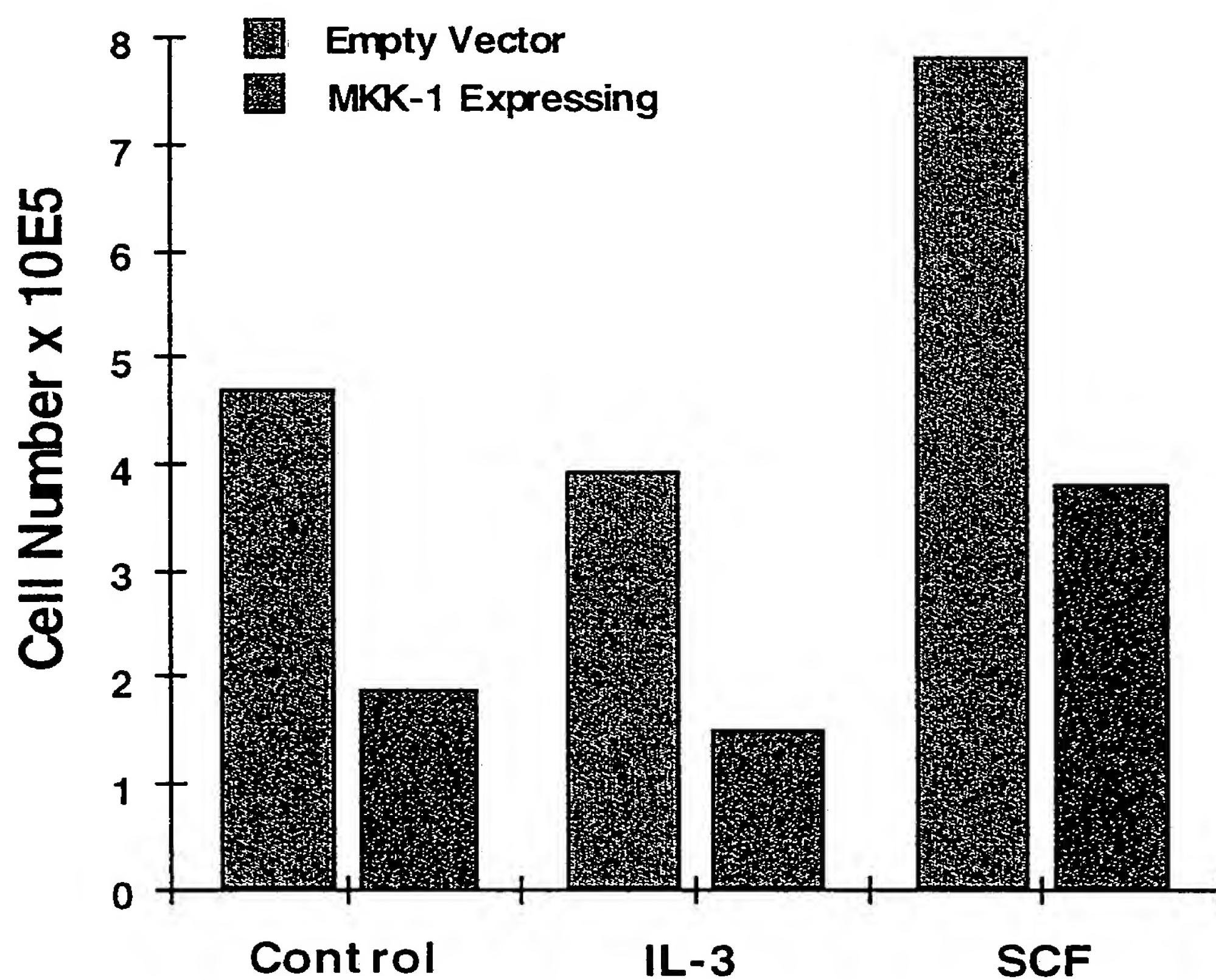


FIGURE 13

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FACS37:FACS37001\FL2-H\FL2-Height

CONTROL

FACS37:FACS37002\FL2-H\FL2-Height

+ TPA

FACS37:FACS37003\FL2-H\FL2-Height

MKK-1

FACS37:FACS37004\FL2-H\FL2-Height

MKK-1 + TPA

FIGURE 14